

DESIGN AND IMPLEMENTATION OF WOMEN SAFETY SYSTEM BASED ON IOT TECHNOLOGIES

ABSTRACT

Today in the current global scenario, the prime question in every girl's mind, considering the ever rising increase of issues on women harassment in recent past is mostly about her safety and security. The only thought haunting every girl is when they will be able to move freely on the streets even in odd hours without worrying about their security. This paper suggests a new perspective to use technology for women safety. “848 Indian Women Are Harassed, Raped, Killed Every Day!!” That's a way beyond HUGE number! We propose an idea which changes the way everyone thinks about women safety. A day when media broadcasts more of women's achievements rather than harassment, it's a feat achieved! Since we (humans) can't respond aptly in critical situations, the need for a device which automatically senses and rescues the victim is the venture of our idea in this paper. We propose to have a device which is the integration of multiple devices, hardware comprises of a wearable “Smart band” which continuously communicates with Smart phone that has access to the internet. The application is programmed and loaded with all the required data which includes Human behavior and reactions to different situations like anger, fear and anxiety. This generates a signal which is transmitted to the smart phone.

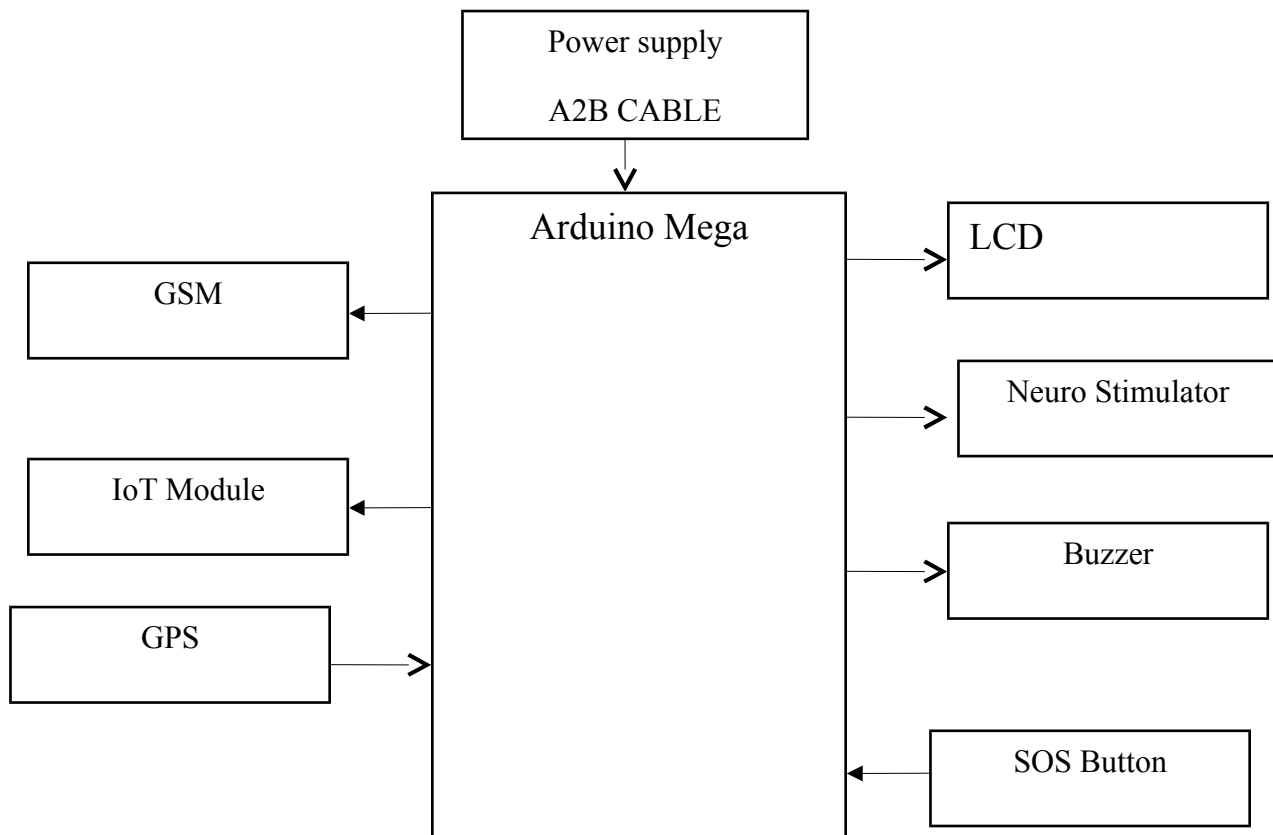
The software or application has access to GPS and Messaging services which is pre-programmed in such a way that whenever it receives emergency signal, it can send help request along with the location co-ordinates to the nearest Police station, relatives and the people in the near radius who have application. This action enables help instantaneously from the Police as well as Public in the near radius who can reach the victim with great accuracy.

EXISTING SYSTEM	PROPOSED SYSTEM
<ul style="list-style-type: none"> ➤ In earlier days women safety is not a concerned matter. ➤ Tracking of women/child are difficult <p>Drawbacks of existing system:</p> <ul style="list-style-type: none"> ➤ Cost wise high 	<ul style="list-style-type: none"> ➤ In the proposed system we can continuously monitor the Women/Child with wearable safety system ➤ Efficient to monitor <p>Advantages of proposed system:</p> <ul style="list-style-type: none"> ➤ Tracking of Women / Childs is possible

WORKING PRINCIPLE:

An AtMega microcontroller controls the system architecture of the wearable with an Arduino Uno boot- loader. A 5 pin header allows for power (+3 V) and ground connections as well as providing access to TX, RX, and reset pins of the ATmega328p. The women/child safety wearable device, which depicts the various technologies and technological standards used. Such as the GPS module upon being triggered by the Arduino GSM shield. The GSM shield is used as an interface to send the data received by the Arduino Mega via SMS or MMS to a smartphone over GSM &GPRS. The GSM shield functions as a trigger for the Arduino Uno to request data from its various modules. If an SMS text with distinct characters is sent to request the current location or GPS coordinates is sent to the Arduino GSM shield via the user's smartphone, then the GSM shield triggers the Arduino Mega to request the current GPS coordinates. Depend on the command we can receive the data's of the system like we want to know about temperature reading, we send the message of particular ward. The SoS button enables the neuro stimulator and provide safety precautions. The IoT module keeps tracking of location and the activities.

BLOCK DIAGRAM



HARDWARE TOOLS

- Arduino Mega
- GPS
- LCD
- GSM
- IoT Module
- Neuro Stimulator
- SOS Button
- Power supply

SOFTWARE TOOLS

- Arduino IDE
- Embedded C

APPLICATION

- Parents can monitor their children's continually.
- Women safety is ensured in this method.